UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 11 2013

Mr. Garald B. Cottrell, President
Wellons Energy Solutions
1836 Eastchester Dr., Suite 108
High Point, North Carolina 27265

Dear Mr. Cottrell:

In your email correspondence of May 21, 2012, and follow-up email correspondence of June 29, 2012, you requested confirmation from the U.S. Environmental Protection Agency that the turkey poult litter processed by you or your contractors would be considered a non-waste fuel when burned for energy recovery in combustion units in accordance with the requirements of 40 CFR 241.3(b)(4). To be designated as a non-waste fuel under that section, the regulations require that discarded non-hazardous secondary materials (NHSM) undergo processing as defined in 40 CFR 241.2. After processing, the NHSM must also meet the legitimacy criteria for fuels in 40 CFR 241.3(d)(1).

Based on the information provided in your email correspondence and supporting materials, we believe that under the 40 CFR Part 241 regulations, poultry litter which is processed in the manner described in your materials and burned in the described combustion units would be considered a non-waste fuel.[1] The remainder of this letter provides the basis for our position. *If there is a discrepancy in the information provided to us, it could result in a different interpretation.*

Proposed Wellons Energy Poultry Litter Project

Wellons Energy proposes to purchase turkey poult litter—a specific poultry litter used by baby turkey chicks (poults)—from farmers, hire contractors to process the material at individual farm sites, and then transfer the material for use as fuel at one of Wellons Energy's cogeneration plants currently powered by wood chips, peanut hulls, cotton gin residues, and other biomass materials. Wellons implements high-efficiency cogeneration facilities which entail the installation of both high pressure boilers and turbine generators for the production of electricity. The combustion units produce high pressure steam which, after going through the turbine, is piped to nearby manufacturing centers for additional use in existing manufacturing processes.

Processing

Processing is defined in 40 CFR 241.2 as operations that transform discarded NHSM into a non-waste fuel or non-waste ingredient, including operations necessary to: remove or destroy contaminants; significantly improve the fuel characteristics, e.g. sizing or drying of the material in combination with other operations;

[1] A non-waste determination under 40 CFR Part 241 does not affect a state's authority to regulate a non-hazardous secondary material as a solid waste. Non-hazardous secondary materials may be regulated simultaneously as a solid waste by the state, but as a non-waste fuel under 40 CFR Part 241 for the purposes of determining the applicable emissions standards under the Clean Air Act for the combustion unit in which it is used.

chemically improve the as-fired energy content; or improve the ingredient characteristics. Minimal operations that result only in modifying the size of the material by shredding do not constitute processing for purposes of this definition.

The determination of whether a particular operation or set of operations constitutes sufficient processing to meet the definition in 40 CFR 241.2 is necessarily a case-specific and fact-specific determination. This determination applies the regulatory definition of processing to the specific discarded material(s) being processed, as described in the correspondence and supporting materials, taking into account the nature and content of the discarded material as well as the types and extent of the operations performed on it. Thus, the same operations may or may not constitute sufficient processing under the regulation in a particular circumstance, depending on the material being processed and the specific facts of the processing. In some cases, certain operations will be sufficient to "transform discarded non-hazardous secondary material into a non-waste fuel[,]" and in other cases, the same operations may not be sufficient to do so.

In your email correspondence, you state that the feedstock poultry litter will be turkey poult litter. You explain that baby turkeys hatch and are subsequently placed into "poult hubs" for an initial five week growth cycle, and that "turkey poult litter" refers to the material removed after this five week cycle. The initial litter material is composed of hard or softwood shavings which have typically been kiln dried, and you note that, because the litter is not typically fluffed or turned during the first five weeks, manure forms a distinct crust on top of the wood shavings. You indicate that a three pass chip screen, operated at the poultry hub site, will remove most of the manure and urine associated with the litter. The three pass screen, as shown in your proposal, has two key steps. The first stage over-size screen will remove the top manure crust, feathers, and any unexpected foreign objects through mechanical vibration. The majority of the wood chips are dropped to the second screen, which separates urine laced fines from the woody biomass material. You indicate that the removed material, including feathers, manure crust, and wet fines will be collected and provided to the poultry farmer for field application as a fertilizer.[2]

According to the submittal, an evaluation of the screening process revealed that approximately 67 percent of the material volume is retained but only 21 percent of the material weight. Based on this data, you indicate that the screening process effectively removes the wet, crusty (and therefore denser) manure layer, while retaining the dry, bulky (and therefore less dense) wood shavings.

Based on your description and evaluation of the proposed processing, we believe your operations meet the definition of processing in 40 CFR 241.2. The poult litter is transformed into a fuel product that closely resembles the clean wood and biomass materials you currently use as fuel through an essential two-step process. The first step, as you describe it, removes the manure crust and other foreign objects. The second step removes the finer materials, in particular those laced with urine residues. In addition to increasing the material's energy value, we expect this two-step screening process would remove a significant amount of nitrogen, sulfur, chlorine, and other contaminants -- which are primarily on the surface of the wood shavings. The post-processing chemical analysis you provided confirms that the two-step screening process does, indeed, remove these chemical contaminants. Our analysis of the screening process, combined with your chemical analysis, allows EPA to determine that you have transformed the turkey poult litter into a fuel product. This fuel product closely resembles both the clean wood shavings which started out as the base for the litter and the clean wood and biomass materials that you routinely burn as traditional fuels.

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[2] The March 21, 2011 final rule addresses the question of whether a non-hazardous secondary material that is burned in combustion units as a fuel or ingredient is a solid waste or not. Thus, this letter does not address the "waste status" of the material removed and provided to poultry farmers for field application as a fertilizer.

Legitimacy Criteria

Under 40 CFR 241.3(d)(1), the legitimacy criteria for fuels include: 1) management of the material as a valuable commodity based on the following factors—storage prior to use must not exceed reasonable time frames, and management of the material must be in a manner consistent with an analogous fuel, or where there is no analogous fuel, adequately contained to prevent releases to the environment; 2) the material must have meaningful heating value and be used as a fuel in a combustion unit that recovers energy; and 3) the material must contain contaminants at levels comparable to or less than those in traditional fuels which the combustion unit is designed to burn.

Manage as a Valuable Commodity

Regarding the first legitimacy criterion, you state that the material will be processed in the described manner while at the poultry hub site. Upon the turkey poults reaching maturity, a litter processor will be contracted to arrive on-site and screen the poult litter. The screened material will then be loaded into covered, walking floor trailers and transported to the Wellons Energy facility later that day. If equipment breakdown or other unexpected interruptions prevent delivery on the day of processing, the material will normally be delivered within 24 hours. You indicate in your proposal that, upon arrival, the material will be unloaded into a covered, below-grade bunker storage facility—a concrete lined receiving area currently used to store approximately 22-25 tractor trailer loads of woody biomass material. Your proposal also notes that the bunker consists of four bays, and once fuel deliveries begin, you have indicated that one such bay shall be designated as the primary storage area for processed poult litter. The processed litter will then be combusted in a co-generation plant within 48 hours of arrival.

Based on the information you supplied, we believe the processed poult litter will be managed as a valuable commodity. We note that storage does not exceed a reasonable time frame, storage in covered bunkers is adequate to prevent releases, and management appears analogous to that of woody biomass currently burned as a fuel.

Meaningful Heating Value and Use as a Fuel in Combustion Units that Recover Energy

Regarding the second legitimacy criterion, you provided analytical data demonstrating that the processed turkey poult litter has an as-received heating value of 5,885 Btu/pound. As the Agency stated in the preamble to the final rule, NHSMs with an energy value greater than 5,000 Btu/pound, as fired, are considered to have a meaningful heating value (see 76 FR 15541, March 21, 2011). You indicated that the material will be covered during transport and storage at Wellons cogeneration plants to prevent the accumulation of additional moisture. Based on this information, we expect the as-received and as-fired heating values to be approximately the same. You also note that energy will be recovered from use of the material as fuel. Thus, we believe the material meets this criterion.

Comparability of Contaminant Levels

Regarding the third legitimacy criterion, you provided constituent data for a sample of processed poult litter and compared it to data for clean biomass from our "Contaminant Concentrations in Traditional Fuels: Tables for Comparison" document.[3] You also indicated that the Wellons Energy cogeneration units that are proposed to burn the processed turkey poult litter are also designed to burn coal.

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[3] *Contaminant Concentrations in Traditional Fuels: Tables for Comparison, November 29, 2011* can be found at www.epa.gov/epawaste/nonhaz/define/index.htm

As indicated in the enclosed table, the processed turkey poult litter meets the contaminants legitimacy criterion when compared to either clean biomass or coal. While your email correspondence indicated that Wellons Energy Solutions chose to compare the constituent levels to those in biomass, you noted that your units are also designed to burn coal. For this reason, our analysis included a comparison of constituent concentrations for both biomass and coal.

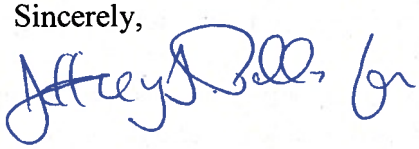
This conclusion assumes that the processed turkey poult litter was tested for any contaminant expected to be present. Additional contaminants for which the processed turkey poult litter was not tested must, as is the case for those tested, be present at levels comparable to or lower than those in clean biomass or coal, based on your knowledge of the material.

Conclusion

Overall, based on the information provided, we believe that the processed turkey poult litter, as described in your email correspondence and supporting materials, meets both the processing definition and the legitimacy criteria outlined above. Accordingly, we would consider this NHSM a non-waste fuel under the 40 CFR Part 241 regulations.

If you have any other questions, please contact David Langston of my staff at 404-562-8478, or by email at langston.david@epa.gov.

Sincerely,



G. Alan Farmer
Director
RCRA Division

Enclosure

cc: George Faison, EPA/ORCR
Ethan Chatfield, EPA R5/ ARD
Stuart Hersh, EPA R5/ORC

Enclosure

Comparison of Contaminant Levels

Contaminant	Units	Processed Turkey Poult Litter Sample	Wood & Biomass Materials: Range[1]	Coal: Range[1]	Results of Comparison
Metal Elements – dry basis					
Antimony (Sb)	ppm	< 0.5	ND – 26	ND – 10	Lower than wood & coal
Arsenic (As)	ppm	0.975	ND – 298	ND – 174	Lower than wood & coal
Beryllium (Be)	ppm	< 0.5	ND – 10	ND – 206	Lower than wood & coal
Cadmium (Cd)	ppm	3.749	ND – 17	ND – 19	Lower than wood & coal
Chromium (Cr)	ppm	4.37	ND – 340	ND – 168	Lower than wood & coal
Cobalt (Co)	ppm	0.67	ND – 213	ND – 25.2	Lower than wood & coal
Lead (Pb)	ppm	1.592	ND – 229	ND – 148	Lower than wood & coal
Manganese (Mn)	ppm	148	ND – 15800	ND – 512	Lower than wood & coal
Mercury (Hg)	ppm	0.016	ND – 1.1	ND – 3.1	Lower than wood & coal
Nickel (Ni)	ppm	2.58	ND – 540	ND – 730	Lower than wood & coal
Selenium (Se)	ppm	1.51	ND – 9.0	ND – 74.3	Lower than wood & coal
Non-metal elements – dry basis					
Chlorine (Cl)	ppm	2274	ND – 5400	ND – 9080	Lower than wood & coal
Fluorine (F)	ppm	6.8	ND – 300	ND – 178	Lower than wood & coal
Nitrogen (N)	ppm	13500	200 - 39500	13600 – 54000	Lower than wood & coal
Sulfur (S)	ppm	3501	ND - 8700	740 – 61300	Lower than wood & coal
Hazardous Air Pollutants					
Formaldehyde	ppm	11.08	1.6 – 27	No data	Lower than wood
16-PAH	ppm	< 0.001	No data	6 – 253	Lower than coal

Notes:

1. Ranges for Wood & Biomass Materials and Coal from a combination of EPA data and literature sources, as presented in EPA document *Contaminant Concentrations in Traditional Fuels: Tables for Comparison, November 29, 2011,* available at www.epa.gov/epawaste/nonhaz/define/index.htm.